

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/014074

International filing date (day/month/year)
10.12.2004

Priority date (day/month/year)
12.12.2003

International Patent Classification (IPC) or both national classification and IPC
G01N30/82

Applicant
AMERSHAM BIOSCIENCES AB

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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10/582443

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/014074

AP20 Rec'd PCT/PTO 08 JUN 2006

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/014074

**Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or
Industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-5,7-10
	No: Claims	6
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/EP2004/014074

Re Item V.**1 Reference is made to the following documents:**

D1 : US 2002/052701 A1 (GORENSTEIN MARC V) 2 May 2002 (2002-05-02)

D2 : US 2003/183565 A1 (MICHEL JONATHAN D ET AL) 2 October 2003 (2003-10-02)

D3 : US 4 546 643 A (BONNEYRAT ET AL) 15 October 1985 (1985-10-15)

2 INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and discloses (the references in parentheses applying to this document):

An automated chromatography system [127-139],
comprising (fig. 17):

- * a chromatography column (174),
- * a plurality of valves (172, within 178) under computer (184) control [132],
- * a pump (170),
- * a detector (176) able to produce an output signal representing the composition of a fluid passing through the detector,
- * a computer (184) provided with and adapted to run software for controlling said valves, pump and detector [132],
- * said software processing the output signal of said detector to identify two signal parameters, i.e. first and second derivative [103].

This automated chromatography system can be used for the analysis of proteins.

The subject-matter of claim 1 therefore differs from this known D1 in
a) at least one loop for the storage of fluid;

b) a plurality of chromatography columns.

These features are well known in chromatography, especially also in the state of the art cited by the applicant (p. 6 I. 15-22), and have no influence on the peak analysis of the fraction collector. Therefore these features are obvious design options for the skilled person.

All the features of claim 1 being known or obvious to the skilled person, this claim does not involve an inventive step.

3 INDEPENDENT CLAIM 6

3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 6 is not new in the sense of Article 33(2) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 6 and discloses (the references in parentheses applying to this document):

Software for controlling an automated chromatography system [127-139], comprising (fig. 17):

- * a detector (176) able to produce an output signal,
- * processing the output signal of said detector to identify two signal parameters, first and second derivative [103].

4 DEPENDENT CLAIMS 2-5,7-10

Dependent claims 2-5,7-10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

5 NOTA

The present application also does not meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT) when considering D2 or D3 (see passages cited in the search report).